ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO BOARD STAFF INTERROGATORY #48

INTERROGATORY

Issue: D-5

Should approval of Enbridge's proposed rate methodology for the service to be provided to TransCanada be granted?

REF: Exhibit A, Tab 2, Schedule 1, Page 5 of 12, par 11, LTC Application

Preamble

Enbridge discusses here the possibility of Segment A being NPS 36 or NPS 42, which cannot be confirmed at this time. Enbridge mentions that it will file an update to the evidence to reflect such change.

Questions

a) Please provide a complete list of the potential evidence updates known to Enbridge at this time, a brief description of each, and an estimate of the timing of such updates.

RESPONSE

a) In order to assist the Board and intervenors, prior to responding to the interrogatory, EGD wishes to provide a brief history of the negotiations between TransCanada and EGD leading to the binding Memorandum of Understanding (MOU) dated January 28th 2013 and two subsequent amendments dated April 26th, 2013 and May 21st, 2013. Please see response to CME Interrogatory #6 at Exhibit I.A1.EGD.CME.6 which attaches a copy of the MOU and subsequent amendments.

The intent of the MOU is laid out under Section 2.1 of the MOU dated January 28th 2013. Sections 2.1 (b) and (c) state that the purpose of the MOU is to optimize use

Witness: M. Giridhar

of existing natural gas infrastructure to meet the capacity needs of the Parties current and future respective customers and plan for future infrastructure to meet medium and long term needs in a coordinated fashion. In particular, TransCanada was seeking to expand short haul capacity on its system pursuant to its May 2012 New Capacity Open Season in which Union Gas and Gaz Metro were awarded short haul capacity from Parkway to their markets.

In accordance with Section 3.2 of the MOU, EGD amended its application to shorten its Parkway to Albion pipeline ("Enbridge Pipeline") by interconnecting with TransCanada at Bram West, modify the size of the Enbridge Pipeline from NPS 36 to NPS 42, and share the pipeline in order to meet the distribution requirements of EGD and the transmission requirements of TransCanada.

Section 3.1 c) of the MOU also granted TransCanada the right to make one of three Elections as described in Schedules A, B and C of the MOU by April 29th, 2013, as summarized below:

- Election #1 contemplates sharing of the Enbridge Pipeline as of November 1, 2015.
- Election #2 provides TransCanada an option to share the Enbridge Pipeline, exercisable by November 1, 2014. If TransCanada did not exercise the option, the Parties would work together to ensure that the toll from Parkway to Bram West was reasonable relative to Enbridge building back to Parkway.
- Election #3 provides for Enbridge to construct the pipeline from Parkway to Maple, required TransCanada to accept delivery at Maple, and TransCanada was not obligated to support, but obligated to not oppose, intervene against, or delay Enbridge in its efforts to seek relevant approvals.

In light of the NEB Decision, TransCanada requested and EGD granted an extension to the Election Date to May 22nd, 2013 as described in Section 4 of Amendment #1 (attached to the response to CME Interrogatory #6 found at Exhibit I.A1.EGD.CME.6), dated April 26th, 2013. The two parties agreed to Amendment #2 (attached to the response to CME Interrogatory #6 response found at Exhibit I.A1.EGD.CME.6) dated May 21st, 2013 with the following salient changes:

- Explicit recognition that due to the impacts of the NEB Decision in RH-003-2011, the current intent of TransCanada's utilization of the Enbridge Pipeline has changed from meeting requests for service pursuant to its May 2012 New Capacity Open Season, to meeting future transportation requests or any existing or future system requirements..
- Agreement by TransCanada to work with the Eastern LDCs and the market in a cooperative and timely manner to establish terms and conditions, to be brought to the NEB for approval, under which TransCanada could expand its system for short haul service requests on a commercially reasonable basis.
- Agreement by TransCanada that in the event the sharing arrangement did not proceed and if the Parties agree, acting reasonably, that the tariff from Parkway to Bram West is not reasonable in relation to Enbridge's cost of extending the pipeline to Parkway, then they will work in good faith to develop a load retention rate, and that failing this, Enbridge will have the right to construct back to Parkway.
- In the event the sharing arrangement with TransCanada does not proceed, the entire capacity of the Enbridge Pipeline will be available for use by Enbridge.

On May 22nd, 2013, TransCanada elected Election #2 and expressed a desire to pursue the project keeping to a November 1, 2015 in service date. TransCanada expressed an interest in utilizing the capacity on the Enbridge Pipeline in order to replace back haul services currently contracted on the Great Lakes Gas Transmission pipeline with forward haul service on Union Gas' Dawn to Parkway system. The in-service date is subject to being able to secure necessary capacity from Dawn to Parkway. As a result of TransCanada's election, Enbridge's base case has reverted to NPS 36 for the Bram West to Albion pipeline and interrogatory responses have been provided on this basis.

In the event that TransCanada and the Eastern LDCs are able to establish terms and conditions under which TransCanada is able to expand short haul service, and TransCanada receives sufficient market interest for short haul service to justify reverting to the NPS 42 pipe size prior to the Settlement Conference, Enbridge may provide a further update to that effect. Otherwise, Enbridge expects that no further updates will be required with respect to pipe size. Other potential updates include changes to the NEB Decision pursuant to TransCanada's Review and Variance Application and updates on the sharing arrangement. The table below summarizes the potential updates known to Enbridge at this time with respect to the Shared Pipeline and associated timing.

Potential Update	**Timing**	**Rationale**
Pipe Size	Prior to Settlement Conference	Based on TransCanada's Election, EGD has reverted to NPS 36. Please see additional rationale above and impact on feasibility below.
TransCanada Tolls	Unknown	TransCanada has applied for Review and Variance of the NEB Decision. The timing is unknown. The outcome does not impact the feasibility of the project. Please see table at I.A3.EGD.STAFF.14.
Sharing arrangement	June 2013	Subject to TransCanada Board of Directors approval in June 2013 and NEB approval subsequently. The outcome does not impact the feasibility of the project as shown below.

Impact of Pipe Size and Sharing Arrangement on Project Feasibility

SUMMARY OF INPUTS	2013-05-15 Update	2013-05-30 Update	Base Case	
	42" Shared	42" Shared	36" Shared[1]	36" Sole Use[2]
Capital Investment				
Mains	[redacted]			
Stations				
Land/Land Rights				
Total	$595,280,523	$595,280,523	$554,575,341	$554,575,341
Future Reinforcement Projects				
2017	$21,000,000	$21,000,000	$21,000,000	$21,000,000
2018	$16,400,000	$16,400,000	$16,400,000	$16,400,000
2019	$13,000,000	$13,000,000	$13,000,000	$13,000,000
2020	$250,000	$250,000	$250,000	$250,000
Capital Maintenance Costs	$5,218,238	$5,218,238	$5,218,238	$5,218,238
Services[3]	$396,820,220	$379,533,696	$379,533,696	$379,533,696
Total Capital	$1,047,968,981	$1,030,682,457	$989,977,275	$989,977,275
Total Transportation Savings	$1,632,014,615	$1,632,014,615	$1,632,014,615	$1,801,373,015
Total Transportation Services Charge	$388,604,339	$388,604,339	$277,595,905	$0
Total Distribution Revenues	$4,841,881,321	$4,546,724,222	$4,546,724,222	$4,546,724,222
Total Customer Additions (2015 - 2024)	156,181	146,337	146,337	146,337
Net Present Value (40 years)	$659,207,816	$637,855,721	$633,574,507	$624,452,756
Profitability Index (40 years)	1.76	1.74	1.77	1.76

[1] Please see Attachment 1 for additional Summary of Inputs and the DCF Analysis
[2] Please see Attachment 2 for additional Summary of Inputs and the DCF Analysis
[3] Services include the costs for distribution mains, services and meters based on the 2013 capital budget.

Witness: M. Giridhar

GTA Project
Economic Feasibility - 40 Year Horizon
Parameters and Results

Line No.	Col. 1 Description	Col. 2
	FEASIBILITY PARAMETERS	
1.	Discount Rate	5.88%
2.	CCA Rate	6.00%
3.	Tax Rate	26.50%
4.	Municipal Tax rate	0.30%
5.	Capital Tax Rate	0.00%
6.	Customer Revenue Horizon (Years)	40
7.	Annual Volumes (m^3)	706,621,245
8.	Annual Distribution Revenues (Dollars)	130,083,942
9.	Annual Average O&M (Dollars)	13,208,237
10.	Annual Average Transportation Services Charge (Dollars)	7,081,150
11.	Annual Average Transportation Savings (Dollars)	160,773,122
12.	Capital Investment (Dollars)	989,977,275
	Working Capital	
13.	O&M (Lead days)	(18.70)
14.	Commodity (Lag days)	3.70
	FEASIBILITY RESULTS	
15.	Net Present Value (Dollars)	633,574,507
16.	Profitability Index	1.77

GTA Project
Economic Feasibility - 40 year Horizon
DCF Analysis

Line No.	Col. 1 Description	Col. 2 10/10 - 09/13	Col. 3 09/13 - 12/13	Col. 4 01/14 - 12/14	Col. 5 Year 1	Col. 6 Year 2	Col. 7 Year 3
	Discount factors to project outset	1.000	0.991	0.955	0.902	0.852	0.805
	INCREMENTAL CAPITAL INVESTMENT						
1.	Investment In Mains	[redacted]	[redacted]	[redacted]	[redacted]	-	(21,000,000)
2.	Investment in Services	-	-	-	(37,570,328)	(38,051,685)	(37,577,338)
3.	Investment in Stations	[redacted]	[redacted]	[redacted]	[redacted]	-	-
4.	Investment in Land	[redacted]	[redacted]	[redacted]	[redacted]	-	-
5.	Investment in Land Rights	[redacted]	[redacted]	[redacted]	[redacted]		
6.	Annual Capital Maintenance Costs				(580)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-
8.	Net Investment Capital	(16,356,221)	(7,512,671)	(187,581,944)	(380,695,413)	(38,054,471)	(58,580,124)
9.	Working Capital	-	-	-	1,101	1,346	2,730
10.	Total Investment	(16,356,221)	(7,512,671)	(187,581,944)	(380,694,312)	(38,053,125)	(58,577,394)
11.	PV Of Total Investment At Project Outset	(821,330,163)	-				
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD						
13.	CCA Tax Shield				5,075,930	8,961,285	9,180,909
14.	PV Of CCA Tax Shield At Project Outset				4,579,970	7,636,777	7,389,555
15.	**ACCUMULATED PV OF CCA TAX SHIELD**				4,579,970	12,216,748	19,606,303
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)						
16.	Gas Distribution Revenue				6,271,994	18,969,998	31,796,356
17.	Transportation Services Charge				1,431,043	11,789,218	11,642,370
18.	Transportation Savings				24,283,396	148,930,993	154,482,286
19.	Gas Costs				(2,719,614)	(8,220,976)	(13,749,757)
20.	O&M Expenses				(823,374)	(2,978,946)	(4,112,659)
21.	Net Operating Cash (Before Taxes)				28,443,444	168,490,286	180,058,597
22.	PV of Net Operating Cash (Before Taxes) At Project Outset				25,146,501	143,586,857	144,926,058
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**				25,146,501	168,733,359	313,659,416
	TAXES						
24.	Income Tax (Before Interest Tax Shield)				(7,415,793)	(44,148,916)	(47,167,947)
25.	Municipal Tax				(459,321)	(1,890,602)	(2,066,343)
26.	Capital Tax				-	-	-
27.	Total Taxes				(7,875,114)	(46,039,518)	(49,234,290)
28.	PV of Total Taxes At Project Outset				(6,966,365)	(39,234,723)	(39,627,830)
29.	**ACCUMULATED PV OF TOTAL TAXES**				(6,966,365)	(46,201,088)	(85,828,919)
	ACCUMULATED NPV AND PI						
30.	Net Present Value		(821,330,163)	(821,330,163)	(798,570,056)	(686,581,144)	(573,893,362)
31.	Profitability Index			0.000	0.028	0.164	0.301

Line No.	Col. 1 Description	Col. 8 Year 4	Col. 9 Year 5	Col. 10 Year 6	Col. 11 Year 7	Col. 12 Year 8	Col. 13 Year 9	Col. 14 Year 10
	Discount factors to project outset	0.760	0.718	0.678	0.640	0.605	0.571	0.540
	INCREMENTAL CAPITAL INVESTMENT							
1.	Investment In Mains	(16,400,000)	(13,000,000)	(250,000)	-	-	-	-
2.	Investment in Services	(37,554,031)	(37,555,834)	(37,991,302)	(38,308,295)	(38,308,295)	(38,308,295)	(38,308,295)
3.	Investment in Stations	-	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-	-
5.	Investment in Land Rights							
6.	Annual Capital Maintenance Costs	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-	-
8.	Net Investment Capital	(53,956,817)	(50,558,620)	(38,244,088)	(39,332,881)	(38,311,081)	(38,311,081)	(38,311,081)
9.	Working Capital	2,873	3,264	3,599	3,851	3,851	3,851	3,851
10.	Total Investment	(53,953,944)	(50,555,356)	(38,240,489)	(39,329,030)	(38,307,230)	(38,307,230)	(38,307,230)
11.	PV Of Total Investment At Project Outset							
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD							
13.	CCA Tax Shield	9,514,545	9,765,105	9,876,377	9,892,345	9,908,460	9,916,018	9,923,618
14.	PV Of CCA Tax Shield At Project Outset	7,232,916	7,011,244	6,697,437	6,335,823	5,993,807	5,665,349	5,354,910
15.	**ACCUMULATED PV OF CCA TAX SHIELD**	26,839,220	33,850,464	40,547,901	46,883,724	52,877,531	58,542,880	63,897,790
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)							
16.	Gas Distribution Revenue	44,634,856	57,550,596	70,574,131	83,740,560	96,981,526	110,222,492	123,463,459
17.	Transportation Services Charge	11,487,154	11,324,084	11,153,642	11,622,378	10,825,847	10,635,423	10,439,247
18.	Transportation Savings	192,335,965	161,419,071	156,859,561	156,743,050	157,109,580	157,360,615	161,395,219
19.	Gas Costs	(19,257,757)	(24,789,726)	(30,355,050)	(35,971,650)	(41,616,201)	(47,260,752)	(52,905,303)
20.	O&M Expenses	(5,257,159)	(6,411,613)	(7,579,751)	(10,807,360)	(9,955,759)	(11,147,758)	(12,339,758)
21.	Net Operating Cash (Before Taxes)	223,943,059	199,092,412	200,652,533	205,326,978	213,344,993	219,810,020	230,052,864
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	170,240,551	142,946,298	136,067,888	131,507,284	129,056,250	125,584,739	124,139,450
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	483,899,967	626,846,265	762,914,154	894,421,437	1,023,477,687	1,149,062,426	1,273,201,876
	TAXES							
24.	Income Tax (Before Interest Tax Shield)	(58,754,434)	(52,128,819)	(52,511,847)	(53,719,305)	(55,813,622)	(57,496,396)	(60,180,293)
25.	Municipal Tax	(2,228,213)	(2,379,889)	(2,494,621)	(2,612,620)	(2,727,553)	(2,842,486)	(2,957,419)
26.	Capital Tax	-	-	-	-	-	-	-
27.	Total Taxes	(60,982,647)	(54,508,707)	(55,006,468)	(56,331,925)	(58,541,175)	(60,338,883)	(63,137,712)
28.	PV of Total Taxes At Project Outset	(46,358,746)	(39,136,690)	(37,301,368)	(36,079,323)	(35,412,617)	(34,473,600)	(34,069,912)
29.	**ACCUMULATED PV OF TOTAL TAXES**	(132,187,665)	(171,324,355)	(208,625,722)	(244,705,045)	(280,117,662)	(314,591,263)	(348,661,175)
	ACCUMULATED NPV AND PI							
30.	Net Present Value	(442,778,641)	(331,957,788)	(226,493,830)	(124,730,046)	(25,092,607)	71,683,881	167,108,329
31.	Profitability Index	0.461	0.596	0.724	0.848	0.969	1.087	1.203

Notes:

(1) September 12 2013 is project outset as time 0.
(2) Oct 1 2010 to Sep 12 2013 - Project planning and engineering.

(3) Sep 12 2013 to Dec 31 2013, mid-term discounting. Discount period equals 3.6/12*0.5 = 0.15

(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.80
(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80
(6) 50% effectivity considered for the first year of customer additions revenue.
(7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

GTA Project
Economic Feasibility - 40 year Horizon
DCF Analysis

	Col. 1	Col. 15	Col. 16	Col. 17	Col. 18	Col. 19	Col. 20	Col. 21	Col. 22	Col. 23	Col. 24	Col. 25	Col. 26
Line No.	Description	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
	Discount factors to project outset	0.510	0.481	0.455	0.429	0.406	0.383	0.362	0.342	0.323	0.305	0.288	0.272
	INCREMENTAL CAPITAL INVESTMENT												
1.	Investment In Mains	-	-	-	-	-	-	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-	-	-	-	-	-	-
5.	Investment in Land Rights												
6.	Annual Capital Maintenance Costs	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-	-	-	-	-	-	-
8.	Net Investment Capital	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
9.	Working Capital	-	-	-	-	-	-	-	-	-	-	-	-
10.	Total Investment	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
11.	PV Of Total Investment At Project Outset												
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD												
13.	CCA Tax Shield	9,626,672	9,043,420	8,495,563	7,989,070	7,513,313	7,058,298	6,630,882	6,229,388	5,852,243	5,497,965	5,173,291	4,868,305
14.	PV Of CCA Tax Shield At Project Outset	4,906,266	4,353,118	3,862,360	3,430,438	3,047,036	2,703,578	2,398,850	2,128,482	1,888,598	1,675,761	1,489,258	1,323,651
15.	**ACCUMULATED PV OF CCA TAX SHIELD**	68,804,057	73,157,175	77,019,535	80,449,973	83,497,009	86,200,587	88,599,437	90,727,919	92,616,517	94,292,278	95,781,536	97,105,187
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)												
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	10,237,680	10,031,051	9,819,672	10,249,931	9,414,241	9,189,995	8,962,036	8,730,592	8,495,877	8,258,092	8,663,521	7,804,480
18.	Transportation Savings	161,094,879	-	-	-	-	-	-	-	-	-	-	-
19.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
20.	O&M Expenses	(12,935,757)	(12,935,757)	(12,935,757)	(14,979,357)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(14,979,357)	(12,935,757)
21.	Net Operating Cash (Before Taxes)	232,753,164	71,451,657	71,240,278	69,626,937	70,834,847	70,610,601	70,382,642	70,151,198	69,916,483	69,678,698	68,040,527	69,225,086
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	118,623,453	34,393,793	32,388,151	29,897,209	28,727,187	27,046,361	25,462,280	23,969,536	22,563,003	21,237,830	19,587,120	18,821,715
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	1,391,825,329	1,426,219,122	1,458,607,273	1,488,504,482	1,517,231,669	1,544,278,030	1,569,740,311	1,593,709,846	1,616,272,849	1,637,510,679	1,657,097,798	1,675,919,514
	TAXES												
24.	Income Tax (Before Interest Tax Shield)	(60,895,870)	(18,150,969)	(18,094,951)	(17,666,601)	(17,986,695)	(17,927,267)	(17,866,856)	(17,805,521)	(17,743,320)	(17,680,304)	(17,245,374)	(17,559,280)
25.	Municipal Tax	(2,957,428)	(2,957,436)	(2,957,445)	(2,960,518)	(2,960,527)	(2,960,535)	(2,960,543)	(2,960,552)	(2,960,560)	(2,960,568)	(2,963,642)	(2,963,651)
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(63,853,298)	(21,108,405)	(21,052,395)	(20,627,119)	(20,947,222)	(20,887,802)	(20,827,399)	(20,766,073)	(20,703,880)	(20,640,873)	(20,209,017)	(20,522,931)
28.	PV of Total Taxes At Project Outset	(32,543,054)	(10,160,689)	(9,571,105)	(8,857,108)	(8,495,180)	(8,000,768)	(7,534,714)	(7,095,433)	(6,681,424)	(6,291,268)	(5,817,657)	(5,580,011)
29.	**ACCUMULATED PV OF TOTAL TAXES**	(381,204,228)	(391,364,918)	(400,936,023)	(409,793,131)	(418,288,310)	(426,289,078)	(433,823,793)	(440,919,226)	(447,600,650)	(453,891,918)	(459,709,574)	(465,289,586)
	ACCUMULATED NPV AND PI												
30.	Net Present Value	258,094,995	286,681,216	313,360,622	337,831,161	361,110,205	382,859,376	403,185,792	422,188,376	439,958,553	456,580,876	471,839,597	486,404,952
31.	Profitability Index	1.314	1.349	1.382	1.411	1.440	1.466	1.491	1.514	1.536	1.556	1.574	1.592

Notes:

(1) September 12 2013 is project outset as time 0.
(2) Oct 1 2010 to Sep 12 2013 - Project planning and engineering.

(3) Sep 12 2013 to Dec 31 2013, mid-term discounting. Discount period equals 3.6/12*0.5 = 0.15

(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.8
(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80
(6) 50% effectivity considered for the first year of customer additions revenue.
(7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

GTA Project
Economic Feasibility - 40 year Horizon
DCF Analysis

	Col. 1	Col. 27	Col. 28	Col. 29	Col. 30	Col. 31	Col. 32	Col. 33	Col. 34	Col. 35	Col. 36	Col. 37	Col. 38
Line No.	Description	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34
	Discount factors to project outset	0.257	0.243	0.229	0.216	0.204	0.193	0.182	0.172	0.163	0.154	0.145	0.137
	INCREMENTAL CAPITAL INVESTMENT												
1.	Investment In Mains	-	-	-	-	-	-	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-	-	-	-	-	-	-
5.	Investment in Land Rights												
6.	Annual Capital Maintenance Costs	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-	-	-	-	-	-	-
8.	Net Investment Capital	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
9.	Working Capital	-	-	-	-	-	-	-	-	-	-	-	-
10.	Total Investment	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
11.	PV Of Total Investment At Project Outset												
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD												
13.	CCA Tax Shield	4,573,687	4,296,926	4,036,938	3,792,704	3,563,268	3,355,856	3,161,014	2,969,855	2,790,273	2,621,567	2,463,077	2,314,183
14.	PV Of CCA Tax Shield At Project Outset	1,174,505	1,042,171	924,754	820,570	728,129	647,673	576,198	511,297	453,709	402,610	357,268	317,035
15.	**ACCUMULATED PV OF CCA TAX SHIELD**	98,279,692	99,321,863	100,246,617	101,067,187	101,795,316	102,442,989	103,019,187	103,530,484	103,984,193	104,386,803	104,744,071	105,061,106
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)												
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	7,558,277	7,309,665	7,058,790	6,805,792	6,550,799	6,940,032	6,068,733	4,626,925	1,159,207	1,165,370	1,170,148	1,173,625
18.	Transportation Savings	-	-	-	-	-	-	-	-	-	-	-	-
19.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
20.	O&M Expenses	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(14,979,357)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)
21.	Net Operating Cash (Before Taxes)	68,978,883	68,730,271	68,479,396	68,226,398	67,971,405	66,317,038	67,489,339	66,047,531	62,579,813	62,585,976	62,590,754	62,594,231
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	17,713,511	16,669,760	15,686,787	14,761,120	13,889,478	12,799,046	12,302,133	11,370,895	10,175,719	9,611,710	9,078,762	8,575,186
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	1,693,633,025	1,710,302,784	1,725,989,572	1,740,750,692	1,754,640,170	1,767,439,215	1,779,741,349	1,791,112,244	1,801,287,963	1,810,899,673	1,819,978,435	1,828,553,620
	TAXES												
24.	Income Tax (Before Interest Tax Shield)	(17,494,034)	(17,428,150)	(17,361,666)	(17,294,619)	(17,227,044)	(16,787,822)	(17,098,480)	(16,716,398)	(15,797,451)	(15,799,082)	(15,800,346)	(15,801,265)
25.	Municipal Tax	(2,963,659)	(2,963,667)	(2,963,676)	(2,963,684)	(2,963,692)	(2,966,766)	(2,966,774)	(2,966,783)	(2,966,791)	(2,966,800)	(2,966,808)	(2,966,816)
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(20,457,693)	(20,391,817)	(20,325,342)	(20,258,303)	(20,190,736)	(19,754,588)	(20,065,254)	(19,683,181)	(18,764,242)	(18,765,881)	(18,767,154)	(18,768,081)
28.	PV of Total Taxes At Project Outset	(5,253,457)	(4,945,808)	(4,655,989)	(4,382,985)	(4,125,835)	(3,812,593)	(3,657,547)	(3,388,702)	(3,051,138)	(2,881,991)	(2,722,167)	(2,571,160)
29.	**ACCUMULATED PV OF TOTAL TAXES**	(470,543,042)	(475,488,850)	(480,144,839)	(484,527,823)	(488,653,658)	(492,466,251)	(496,123,798)	(499,512,500)	(502,563,638)	(505,445,629)	(508,167,796)	(510,738,956)
	ACCUMULATED NPV AND PI												
30.	Net Present Value	500,039,511	512,805,635	524,761,187	535,959,893	546,451,665	556,085,790	565,306,575	573,800,065	581,378,355	588,510,684	595,224,547	601,545,607
31.	Profitability Index	1.609	1.624	1.639	1.653	1.665	1.677	1.688	1.699	1.708	1.717	1.725	1.732

Notes:

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(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.8
(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80
(6) 50% effectivity considered for the first year of customer additions revenue.
(7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

GTA Project
Economic Feasibility - 40 year Horizon
DCF Analysis

	Col. 1	Col. 39	Col. 40	Col. 41	Col. 42	Col. 43	Col. 44
Line No.	Description	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
	Discount factors to project outset	0.129	0.122	0.115	0.109	0.103	0.097
	INCREMENTAL CAPITAL INVESTMENT						
1.	Investment In Mains	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-
5.	Investment in Land Rights						
6.	Annual Capital Maintenance Costs	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-
8.	Net Investment Capital	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
9.	Working Capital	-	-	-	-	-	-
10.	Total Investment	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
11.	PV Of Total Investment At Project Outset						
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD						
13.	CCA Tax Shield	2,182,426	2,058,650	1,934,247	1,817,374	1,707,573	14,253,178
14.	PV Of CCA Tax Shield At Project Outset	282,385	251,581	223,254	198,118	175,814	1,386,046
15.	**ACCUMULATED PV OF CCA TAX SHIELD**	105,343,491	105,595,072	105,818,326	106,016,444	106,192,258	**107,578,304**
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)						
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	1,821,979	1,201,817	1,196,125	1,195,536	1,193,988	1,191,525
18.	Transportation Savings	-	-	-	-	-	-
19.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
20.	O&M Expenses	(14,979,357)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)
21.	Net Operating Cash (Before Taxes)	61,198,985	62,622,423	62,616,731	62,616,142	62,614,594	62,612,131
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	7,918,561	7,652,876	7,227,332	6,826,007	6,446,868	6,088,699
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	1,836,472,181	1,844,125,057	1,851,352,389	1,858,178,396	1,864,625,263	**1,870,713,962**
	TAXES						
24.	Income Tax (Before Interest Tax Shield)	(15,430,710)	(15,807,919)	(15,806,408)	(15,806,250)	(15,805,838)	(15,805,183)
25.	Municipal Tax	(2,969,890)	(2,969,898)	(2,969,907)	(2,969,915)	(2,969,923)	(2,969,932)
26.	Capital Tax	-	-	-	-	-	-
27.	Total Taxes	(18,400,600)	(18,777,817)	(18,776,315)	(18,776,165)	(18,775,761)	(18,775,115)
28.	PV of Total Taxes At Project Outset	(2,380,861)	(2,294,774)	(2,167,195)	(2,046,856)	(1,933,173)	(1,825,781)
29.	**ACCUMULATED PV OF TOTAL TAXES**	(513,119,817)	(515,414,591)	(517,581,786)	(519,628,642)	(521,561,815)	**(523,387,596)**
	ACCUMULATED NPV AND PI						
30.	Net Present Value	607,365,692	612,975,375	618,258,766	623,236,035	627,925,543	**633,574,507**
31.	Profitability Index	1.739	1.746	1.753	1.759	1.765	**1.7714**

Notes:

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(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.8

(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80

(6) 50% effectivity considered for the first year of customer additions revenue.

(7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80

(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

Incremental Customer Additions

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residential	12,277	12,607	13,034	13,148	13,331	13,535	13,748	13,748	13,748	13,748
Commercial	1,291	1,327	1,250	1,253	1,250	1,261	1,269	1,269	1,269	1,269
Apartment	71	71	69	69	68	67	67	67	67	67
Industrial	3	3	2	2	2	2	2	2	2	2
Total	**13,642**	**14,008**	**14,355**	**14,472**	**14,651**	**14,865**	**15,086**	**15,086**	**15,086**	**15,086**

Average Annual Volume per Customer

($10^3 m^3$)	
Residential	2.568
Commercial	20.230
Apartment	154.877
Industrial	109.481

Total Cumulative Volumes*

($10^3 m^3$)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	15,764	47,715	80,638	114,255	148,254	182,750	217,782	253,087	288,392	323,696	341,349
Commercial	13,058	39,540	65,606	90,924	116,242	141,640	167,231	192,903	218,575	244,247	257,083
Apartment	5,498	16,494	27,336	38,022	48,631	59,086	69,462	79,839	90,216	100,593	105,781
Industrial	164	493	766	985	1,204	1,423	1,642	1,861	2,080	2,299	2,409
Total	**34,484**	**104,241**	**174,346**	**244,187**	**314,332**	**384,900**	**456,118**	**527,690**	**599,263**	**670,835**	**706,621**

Note* 50% effectivity considered for the first year of customer additions

Savings on Gas Transportation

($s)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Savings	**24,283,396**	**148,930,993**	**154,482,286**	**192,335,965**	**161,419,071**	**156,859,561**	**156,743,050**	**157,109,580**	**157,360,615**	**161,395,219**	**161,094,879**

GTA Project
Economic Feasibility - 40 Year Horizon
Parameters and Results

Line No.	Description	
	FEASIBILITY PARAMETERS	
1.	Discount Rate	5.88%
2.	CCA Rate	6.00%
3.	Tax Rate	26.50%
4.	Municipal Tax rate	0.30%
5.	Capital Tax Rate	0.00%
6.	Customer Revenue Horizon (Years)	40
7.	Annual Volumes (m^3)	706,621,245
8.	Annual Distribution Revenues (Dollars)	130,083,942
9.	Annual Average O&M (Dollars)	13,208,237
10.	Annual Average Transportation Services Charge (Dollars)	-
11.	Annual Average Transportation Savings (Dollars)	177,430,802
12.	Capital Investment (Dollars)	989,977,275
	Working Capital	
13.	O&M (Lead days)	(18.70)
14.	Commodity (Lag days)	3.70
	FEASIBILITY RESULTS	
15.	Net Present Value (Dollars)	624,452,756
16.	Profitability Index	1.76

GTA Project
Economic Feasibility - 40 year Horizon
DCF Analysis

Line No.	Col. 1 Description	Col. 2 10/10 - 09/13	Col. 3 09/13 - 12/13	Col. 4 01/14 - 12/14	Col. 5 Year 1	Col. 6 Year 2	Col. 7 Year 3	Col. 8 Year 4	Col. 9 Year 5	Col. 10 Year 6	Col. 11 Year 7	Col. 12 Year 8	Col. 13 Year 9	Col. 14 Year 10
	Discount factors to project outset	1.000	0.991	0.955	0.902	0.852	0.805	0.760	0.718	0.678	0.640	0.605	0.571	0.540
	INCREMENTAL CAPITAL INVESTMENT													
1.	Investment In Mains	[redacted]				-	(21,000,000)	(16,400,000)	(13,000,000)	(250,000)	-	-	-	-
2.	Investment in Services	-	-	-	(37,570,328)	(38,051,685)	(37,577,338)	(37,554,031)	(37,555,834)	(37,991,302)	(38,308,295)	(38,308,295)	(38,308,295)	(38,308,295)
3.	Investment in Stations	[redacted]				-	-	-	-	-	-	-	-	-
4.	Investment in Land					-	-	-	-	-	-	-	-	-
5.	Investment in Land Rights													
6.	Annual Capital Maintenance Costs				(580)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	Net Investment Capital	(16,356,221)	(7,512,671)	(187,581,944)	(380,695,413)	(38,054,471)	(58,580,124)	(53,956,817)	(50,558,620)	(38,244,088)	(39,332,881)	(38,311,081)	(38,311,081)	(38,311,081)
9.	Working Capital	-	-	-	1,101	1,346	2,730	2,873	3,264	3,599	3,851	3,851	3,851	3,851
10.	Total Investment	(16,356,221)	(7,512,671)	(187,581,944)	(380,694,312)	(38,053,125)	(58,577,394)	(53,953,944)	(50,555,356)	(38,240,489)	(39,329,030)	(38,307,230)	(38,307,230)	(38,307,230)
11.	PV Of Total Investment At Project Outset	(821,330,163)	-											
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD													
13.	CCA Tax Shield				5,075,930	8,961,285	9,180,909	9,514,545	9,765,105	9,876,377	9,892,345	9,908,460	9,916,018	9,923,618
14.	PV Of CCA Tax Shield At Project Outset				4,579,970	7,636,777	7,389,555	7,232,916	7,011,244	6,697,437	6,335,823	5,993,807	5,665,349	5,354,910
15.	**ACCUMULATED PV OF CCA TAX SHIELD**				4,579,970	12,216,748	19,606,303	26,839,220	33,850,464	40,547,901	46,883,724	52,877,531	58,542,880	63,897,790
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)													
16.	Gas Distribution Revenue				6,271,994	18,969,998	31,796,356	44,634,856	57,550,596	70,574,131	83,740,560	96,981,526	110,222,492	123,463,459
17.	Transportation Services Charge				-	-	-	-	-	-	-	-	-	-
18.	Transportation Savings				27,064,996	165,620,593	171,126,286	208,979,965	178,063,071	173,549,161	173,387,050	173,753,580	174,004,615	178,084,819
19.	Gas Costs				(2,719,614)	(8,220,976)	(13,749,757)	(19,257,757)	(24,789,726)	(30,355,050)	(35,971,650)	(41,616,201)	(47,260,752)	(52,905,303)
20.	O&M Expenses				(823,374)	(2,978,946)	(4,112,659)	(5,257,159)	(6,411,613)	(7,579,751)	(10,807,360)	(9,955,759)	(11,147,758)	(12,339,758)
21.	Net Operating Cash (Before Taxes)				29,794,001	173,390,668	185,060,227	229,099,905	204,412,328	206,188,491	210,348,599	219,163,146	225,818,597	236,303,217
22.	PV of Net Operating Cash (Before Taxes) At Project Outset				26,337,855	147,762,947	148,951,783	174,160,763	146,765,943	139,821,971	134,723,519	132,575,756	129,017,638	127,512,220
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**				26,337,855	174,100,801	323,052,585	497,213,348	643,979,291	783,801,262	918,524,780	1,051,100,536	1,180,118,174	1,307,630,394
	TAXES													
24.	Income Tax (Before Interest Tax Shield)				(7,773,690)	(45,447,518)	(48,493,379)	(60,120,998)	(53,538,596)	(53,978,876)	(55,050,035)	(57,355,432)	(59,088,669)	(61,836,636)
25.	Municipal Tax				(459,321)	(1,890,602)	(2,066,343)	(2,228,213)	(2,379,889)	(2,494,621)	(2,612,620)	(2,727,553)	(2,842,486)	(2,957,419)
26.	Capital Tax				-	-	-	-	-	-	-	-	-	-
27.	Total Taxes				(8,233,011)	(47,338,120)	(50,559,722)	(62,349,211)	(55,918,485)	(56,473,497)	(57,662,654)	(60,082,985)	(61,931,156)	(64,794,056)
28.	PV of Total Taxes At Project Outset				(7,282,073)	(40,341,387)	(40,694,648)	(47,397,603)	(40,148,896)	(38,296,200)	(36,931,625)	(36,345,286)	(35,383,319)	(34,963,696)
29.	**ACCUMULATED PV OF TOTAL TAXES**				(7,282,073)	(47,623,460)	(88,318,108)	(135,715,711)	(175,864,606)	(214,160,806)	(251,092,431)	(287,437,717)	(322,821,036)	(357,784,732)
	ACCUMULATED NPV AND PI													
30.	Net Present Value		(821,330,163)	(821,330,163)	(797,694,411)	(682,636,074)	(566,989,383)	(432,993,306)	(319,365,014)	(211,141,805)	(107,014,089)	(4,789,812)	94,509,856	192,413,290
31.	Profitability Index			0.000	0.029	0.169	0.310	0.473	0.611	0.743	0.870	0.994	1.115	1.234

Notes:

(1) September 12 2013 is project outset as time 0.
(2) Oct 1 2010 to Sep 12 2013 - Project planning and engineering.

(3) Sep 12 2013 to Dec 31 2013, mid-term discounting. Discount period equals 3.6/12*0.5 = 0.15

(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.80
(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80
(6) 50% effectivity considered for the first year of customer additions revenue.
(7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

GTA Project
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Line No.	Col. 1 Description	Col. 15 Year 11	Col. 16 Year 12	Col. 17 Year 13	Col. 18 Year 14	Col. 19 Year 15	Col. 20 Year 16	Col. 21 Year 17	Col. 22 Year 18	Col. 23 Year 19	Col. 24 Year 20	Col. 25 Year 21	Col. 26 Year 22
	Discount factors to project outset	0.510	0.481	0.455	0.429	0.406	0.383	0.362	0.342	0.323	0.305	0.288	0.272
	INCREMENTAL CAPITAL INVESTMENT												
1.	Investment In Mains	-	-	-	-	-	-	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-	-	-	-	-	-	-
5.	Investment in Land Rights												
6.	Annual Capital Maintenance Costs	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-	-	-	-	-	-	-
8.	Net Investment Capital	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
9.	Working Capital	-	-	-	-	-	-	-	-	-	-	-	-
10.	Total Investment	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)
11.	PV Of Total Investment At Project Outset												
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD												
13.	CCA Tax Shield	9,626,672	9,043,420	8,495,563	7,989,070	7,513,313	7,058,298	6,630,882	6,229,388	5,852,243	5,497,965	5,173,291	4,868,305
14.	PV Of CCA Tax Shield At Project Outset	4,906,266	4,353,118	3,862,360	3,430,438	3,047,036	2,703,578	2,398,850	2,128,482	1,888,598	1,675,761	1,489,258	1,323,651
15.	**ACCUMULATED PV OF CCA TAX SHIELD**	68,804,057	73,157,175	77,019,535	80,449,973	83,497,009	86,200,587	88,599,437	90,727,919	92,616,517	94,292,278	95,781,536	97,105,187
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)												
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	-	-	-	-	-	-	-	-	-	-	-	-
18.	Transportation Savings	177,738,879	-	-	-	-	-	-	-	-	-	-	-
19.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
20.	O&M Expenses	(12,935,757)	(12,935,757)	(12,935,757)	(14,979,357)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(14,979,357)	(12,935,757)
21.	Net Operating Cash (Before Taxes)	239,159,485	61,420,606	61,420,606	59,377,006	61,420,606	61,420,606	61,420,606	61,420,606	61,420,606	61,420,606	59,377,006	61,420,606
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	121,888,456	29,565,271	27,923,809	25,495,976	24,909,226	23,526,268	22,220,091	20,986,433	19,821,267	18,720,792	17,093,115	16,699,743
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	1,429,518,851	1,459,084,121	1,487,007,930	1,512,503,906	1,537,413,133	1,560,939,400	1,583,159,491	1,604,145,924	1,623,967,191	1,642,687,983	1,659,781,097	1,676,480,841
	TAXES												
24.	Income Tax (Before Interest Tax Shield)	(62,593,545)	(15,492,740)	(15,492,738)	(14,950,369)	(15,491,921)	(15,491,919)	(15,491,917)	(15,491,914)	(15,491,912)	(15,491,910)	(14,949,541)	(15,491,093)
25.	Municipal Tax	(2,957,428)	(2,957,436)	(2,957,445)	(2,960,518)	(2,960,527)	(2,960,535)	(2,960,543)	(2,960,552)	(2,960,560)	(2,960,568)	(2,963,642)	(2,963,651)
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(65,550,973)	(18,450,176)	(18,450,182)	(17,910,888)	(18,452,448)	(18,452,454)	(18,452,460)	(18,452,466)	(18,452,472)	(18,452,478)	(17,913,184)	(18,454,744)
28.	PV of Total Taxes At Project Outset	(33,408,279)	(8,881,131)	(8,388,054)	(7,690,781)	(7,483,420)	(7,067,943)	(6,675,534)	(6,304,911)	(5,954,864)	(5,624,253)	(5,156,745)	(5,017,689)
29.	**ACCUMULATED PV OF TOTAL TAXES**	(391,193,012)	(400,074,143)	(408,462,197)	(416,152,978)	(423,636,398)	(430,704,342)	(437,379,875)	(443,684,786)	(449,639,651)	(455,263,903)	(460,420,649)	(465,438,337)
	ACCUMULATED NPV AND PI												
30.	Net Present Value	285,799,733	310,836,991	334,235,105	355,470,738	375,943,581	395,105,483	413,048,890	429,858,894	445,613,895	460,386,195	473,811,822	486,817,527
31.	Profitability Index	1.348	1.378	1.407	1.433	1.458	1.481	1.503	1.523	1.543	1.561	1.577	1.593

Notes:

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(3) Sep 12 2013 to Dec 31 2013, mid-term discounting. Discount period equals 3.6/12*0.5 = 0.15

(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.8
(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80
(6) 50% effectivity considered for the first year of customer additions revenue.
(7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80
(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

GTA Project
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	Col. 1	Col. 27	Col. 28	Col. 29	Col. 30	Col. 31	Col. 32	Col. 33	Col. 34	Col. 35	Col. 36	Col. 37	Col. 38
Line No.	Description	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34
	Discount factors to project outset	0.257	0.243	0.229	0.216	0.204	0.193	0.182	0.172	0.163	0.154	0.145	0.137
	INCREMENTAL CAPITAL INVESTMENT												
1.	Investment In Mains	-	-	-	-	-	-	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-	-	-	-	-	-	-
5.	Investment in Land Rights												
6.	Annual Capital Maintenance Costs	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-	-	-	-	-	-	-
8.	Net Investment Capital	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
9.	Working Capital	-	-	-	-	-	-	-	-	-	-	-	-
10.	Total Investment	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
11.	PV Of Total Investment At Project Outset												
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD												
13.	CCA Tax Shield	4,573,687	4,296,926	4,036,938	3,792,704	3,563,268	3,355,856	3,161,014	2,969,855	2,790,273	2,621,567	2,463,077	2,314,183
14.	PV Of CCA Tax Shield At Project Outset	1,174,505	1,042,171	924,754	820,570	728,129	647,673	576,198	511,297	453,709	402,610	357,268	317,035
15.	**ACCUMULATED PV OF CCA TAX SHIELD**	98,279,692	99,321,863	100,246,617	101,067,187	101,795,316	102,442,989	103,019,187	103,530,484	103,984,193	104,386,803	104,744,071	105,061,106
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)												
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	-	-	-	-	-	-	-	-	-	-	-	-
18.	Transportation Savings	-	-	-	-	-	-	-	-	-	-	-	-
19.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
20.	O&M Expenses	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(14,979,357)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)
21.	Net Operating Cash (Before Taxes)	61,420,606	61,420,606	61,420,606	61,420,606	61,420,606	59,377,006	61,420,606	61,420,606	61,420,606	61,420,606	61,420,606	61,420,606
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	15,772,575	14,896,882	14,069,808	13,288,653	12,550,868	11,459,634	11,195,909	10,574,313	9,987,228	9,432,737	8,909,032	8,414,403
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	1,692,253,415	1,707,150,298	1,721,220,106	1,734,508,759	1,747,059,627	1,758,519,262	1,769,715,171	1,780,289,483	1,790,276,711	1,799,709,448	1,808,618,480	1,817,032,884
	TAXES												
24.	Income Tax (Before Interest Tax Shield)	(15,491,091)	(15,491,089)	(15,491,087)	(15,491,084)	(15,491,082)	(14,948,714)	(15,490,265)	(15,490,263)	(15,490,261)	(15,490,259)	(15,490,256)	(15,490,254)
25.	Municipal Tax	(2,963,659)	(2,963,667)	(2,963,676)	(2,963,684)	(2,963,692)	(2,966,766)	(2,966,774)	(2,966,783)	(2,966,791)	(2,966,800)	(2,966,808)	(2,966,816)
26.	Capital Tax	-	-	-	-	-	-	-	-	-	-	-	-
27.	Total Taxes	(18,454,750)	(18,454,756)	(18,454,762)	(18,454,768)	(18,454,774)	(17,915,480)	(18,457,040)	(18,457,046)	(18,457,052)	(18,457,058)	(18,457,064)	(18,457,071)
28.	PV of Total Taxes At Project Outset	(4,739,109)	(4,475,995)	(4,227,489)	(3,992,781)	(3,771,103)	(3,457,649)	(3,364,398)	(3,177,607)	(3,001,188)	(2,834,563)	(2,677,189)	(2,528,553)
29.	**ACCUMULATED PV OF TOTAL TAXES**	(470,177,446)	(474,653,441)	(478,880,930)	(482,873,711)	(486,644,814)	(490,102,463)	(493,466,861)	(496,644,468)	(499,645,656)	(502,480,219)	(505,157,409)	(507,685,961)
	ACCUMULATED NPV AND PI												
30.	Net Present Value	499,025,498	510,488,557	521,255,630	531,372,072	540,879,966	549,529,624	557,937,334	565,845,336	573,285,085	580,285,869	586,874,980	593,077,866
31.	Profitability Index	1.608	1.622	1.635	1.647	1.659	1.669	1.679	1.689	1.698	1.707	1.715	1.722

Notes:

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(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.8
(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80
(6) 50% effectivity considered for the first year of customer additions revenue.
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(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

GTA Project
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Line No.	Col. 1 Description	Col. 39 Year 35	Col. 40 Year 36	Col. 41 Year 37	Col. 42 Year 38	Col. 43 Year 39	Col. 44 Year 40
	Discount factors to project outset	0.129	0.122	0.115	0.109	0.103	0.097
	INCREMENTAL CAPITAL INVESTMENT						
1.	Investment In Mains	-	-	-	-	-	-
2.	Investment in Services	-	-	-	-	-	-
3.	Investment in Stations	-	-	-	-	-	-
4.	Investment in Land	-	-	-	-	-	-
5.	Investment in Land Rights						
6.	Annual Capital Maintenance Costs	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
7.	Contribution In Aid Of Construction	-	-	-	-	-	-
8.	Net Investment Capital	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
9.	Working Capital	-	-	-	-	-	-
10.	Total Investment	(1,024,586)	(2,786)	(2,786)	(2,786)	(2,786)	(2,786)
11.	PV Of Total Investment At Project Outset						
12.	**ACCUMULATED PV OF TOTAL INVESTMENT**	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)	(821,330,163)
	CCA TAX SHIELD						
13.	CCA Tax Shield	2,182,426	2,058,650	1,934,247	1,817,374	1,707,573	14,253,178
14.	PV Of CCA Tax Shield At Project Outset	282,385	251,581	223,254	198,118	175,814	1,386,046
15.	**ACCUMULATED PV OF CCA TAX SHIELD**	105,343,491	105,595,072	105,818,326	106,016,444	106,192,258	**107,578,304**
	INCREMENTAL OPERATING CASHFLOWS (BEFORE TAXES)						
16.	Gas Distribution Revenue	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942	130,083,942
17.	Transportation Services Charge	-	-	-	-	-	-
18.	Transportation Savings	-	-	-	-	-	-
19.	Gas Costs	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)	(55,727,578)
20.	O&M Expenses	(14,979,357)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)	(12,935,757)
21.	Net Operating Cash (Before Taxes)	59,377,006	61,420,606	61,420,606	61,420,606	61,420,606	61,420,606
22.	PV of Net Operating Cash (Before Taxes) At Project Outset	7,682,814	7,506,006	7,089,273	6,695,677	6,323,933	5,972,829
23.	**ACCUMULATED PV OF NET OPERATING CASH (BEFORE TAXES)**	1,824,715,698	1,832,221,704	1,839,310,977	1,846,006,654	1,852,330,587	**1,858,303,416**
	TAXES						
24.	Income Tax (Before Interest Tax Shield)	(14,947,886)	(15,489,438)	(15,489,435)	(15,489,433)	(15,489,431)	(15,489,429)
25.	Municipal Tax	(2,969,890)	(2,969,898)	(2,969,907)	(2,969,915)	(2,969,923)	(2,969,932)
26.	Capital Tax	-	-	-	-	-	-
27.	Total Taxes	(17,917,776)	(18,459,336)	(18,459,342)	(18,459,348)	(18,459,354)	(18,459,360)
28.	PV of Total Taxes At Project Outset	(2,318,388)	(2,255,853)	(2,130,609)	(2,012,319)	(1,900,596)	(1,795,075)
29.	**ACCUMULATED PV OF TOTAL TAXES**	(510,004,349)	(512,260,203)	(514,390,812)	(516,403,131)	(518,303,726)	**(520,098,801)**
	ACCUMULATED NPV AND PI						
30.	Net Present Value	598,724,677	604,226,410	609,408,328	614,289,805	618,888,956	**624,452,756**
31.	Profitability Index	1.729	1.736	1.742	1.748	1.754	**1.7603**

Notes:

(1) September 12 2013 is project outset as time 0.

(2) Oct 1 2010 to Sep 12 2013 - Project planning and engineering.

(3) Sep 12 2013 to Dec 31 2013, mid-term discounting. Discount period equals 3.6/12*0.5 = 0.1

(4) Jan 1 to Dec 31 2014, mid -term discounting. Discount period equals 12/12*0.5+3.6/12 = 0.8

(5) Year 1 - capital spending Jan 1 to Dec 31 2015, mid -term discounting. Discount perio equals 12/12*0.5+1+3.6/12 = 1.80

(6) 50% effectivity considered for the first year of customer additions revenue.

(7) First year of customer additions revenues Jan 1 to Dec 31 2015. Discount period equals 12/12*0.5+1+3.6/12 = 1.80

(8) Transportation savings and Transportation Services Charge start Oct 15, 2015, mid-terr disounting. Discount period equals 2.5/12*0.5+9.5/12+1+3.6/12 = 2.196

Incremental Customer Additions

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residential	12,277	12,607	13,034	13,148	13,331	13,535	13,748	13,748	13,748	13,748
Commercial	1,291	1,327	1,250	1,253	1,250	1,261	1,269	1,269	1,269	1,269
Apartment	71	71	69	69	68	67	67	67	67	67
Industrial	3	3	2	2	2	2	2	2	2	2
Total	**13,642**	**14,008**	**14,355**	**14,472**	**14,651**	**14,865**	**15,086**	**15,086**	**15,086**	**15,086**

Average Annual Volume per Customer

($10^3 m^3$)	
Residential	2.568
Commercial	20.230
Apartment	154.877
Industrial	109.481

Total Cumulative Volumes*

($10^3 m^3$)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	15,764	47,715	80,638	114,255	148,254	182,750	217,782	253,087	288,392	323,696	341,349
Commercial	13,058	39,540	65,606	90,924	116,242	141,640	167,231	192,903	218,575	244,247	257,083
Apartment	5,498	16,494	27,336	38,022	48,631	59,086	69,462	79,839	90,216	100,593	105,781
Industrial	164	493	766	985	1,204	1,423	1,642	1,861	2,080	2,299	2,409
Total	**34,484**	**104,241**	**174,346**	**244,187**	**314,332**	**384,900**	**456,118**	**527,690**	**599,263**	**670,835**	**706,621**

Note* 50% effectivity considered for the first year of customer additions

Savings on Gas Transportation

($s)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Savings	**27,064,996**	**165,620,593**	**171,126,286**	**208,979,965**	**178,063,071**	**173,549,161**	**173,387,050**	**173,753,580**	**174,004,615**	**178,084,819**	**177,738,879**

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
BOARD STAFF INTERROGATORY #49

INTERROGATORY

Issue: D-5
Should approval of Enbridge's proposed rate methodology for the service to be provided to TransCanada be granted?

REF: Exhibit E, Tab 1, Schedule 2, Arrangement with TransCanada

Preamble
Enbridge discusses here the arrangement with TransCanada for the Shared Pipeline. The evidence refers to a 15-year term contract with TransCanada for transportation services (the Transportation Service Agreement or TSA).

Questions

a) In paragraph 2, Enbridge states that "for cost allocation purposes, Enbridge will retain 800,000 GJ (40%) of the design capacity and will assign the remainder of the design capacity (1,200,000 GJ or 60%) to TransCanada." Is the 60% ratio reflective of the daily contractual entitlement that TransCanada would have on the Shared Pipeline?

b) Enbridge is proposing to treat the Shared Pipeline as a stand-alone cost item. Please provide the revenue requirement that would be allocated to Rate 332 were Enbridge to use a more "traditional approach" and use its cost allocation study underpinning its 2013 Board-approved rates to allocate the incremental revenue requirement of this project to that class. Please use the 2016 revenue requirement for this comparative analysis.

c) Please explain why the income taxes on earnings in Attachment 1 are negative and explain why a direct assignment to TransCanada is appropriate.

Witnesses: K. Culbert
C. Fernandes
M. Giridhar
A. Kacicnik
S. Murray

d) Please provide the rate impacts related to the Shared Pipeline on the existing rate classes. Please include an explanation of how the revenue requirement would be allocated to the various customer rate classes.

e) Please list the evidence updates foreseen specifically with respect to the Shared Pipeline, including any updates related to the March 27, 2013 NEB Decision on TCPL tolls.

f) Please file the Transportation Services Agreement ("TSA") contract with TCPL, in confidence if necessary.

g) What is the status of the TCPL negotiations?

h) Does the Base Case Economic Feasibility model an NPS 36" or an NPS 42" pipeline?

i) What is the design capacity of the NPS 36" and NPS 42" pipelines and how would Enbridge utilize the 36" line differently if the 42" line does not proceed?

j) What financial and other key assumptions are included in the Economic Feasibility for the Shared Pipeline? How many years of transportation revenue is assumed? Is the revenue requirement from the Shared Pipeline included in the Economic Feasibility?

k) With respect to the new Rate 332 for transportation services, is there a prospect that other ex-franchise customers will take service under this rate?

l) Enbridge currently has an approved transmission Rate 331 Tecumseh to Dawn service. Please compare and contrast the features of this rate to the proposed Rate 332.

Witnesses: K. Culbert
C. Fernandes
M. Giridhar
A. Kacicnik
S. Murray

m) With respect to the Revenue Requirement shown for the Shared Pipeline at Exhibit E/T1/S2, the required rate of return is shown as 6.81%. Is this based on the Company's approved 2013 Cost of Capital? Please explain.

RESPONSE

a) Yes, the 60% ratio is reflective of the daily contractual entitlement that TransCanada would have on the Shared Pipeline assuming an NPS 42 pipe size. The corresponding daily contractual entitlement for an NPS 36 pipe size for TransCanada is 50% or 800,000 GJ. Please also see the response to Board Staff Interrogatory #48 at Exhibit I.D5.EGD.Staff.48.

b) The Company does not agree with how the proposed approach was characterized in this interrogatory question.

Please note that Tecumseh Storage services, Rates 325, 330 and 331, are also set on a stand-alone basis. Such approach is in place to ensure the proper separation of costs between storage and distribution services and to remove potential for cross-subsidization between distinct services.

Also, as laid out at Exhibit E, Tab 1, Schedule 2, Page 4, Para. 14, the Rate 332 Transportation Services Agreement is inherently different from the distribution services provided by the Company as it reflects a shared use facility by two entities and is the outcome of OEB direction to the industry for integrated regional planning to optimize infrastructure in the region. The proposed approach most closely matches the cost to provide service over the contract term.

c) The Company has provided an updated shared pipeline revenue requirement[1] at interrogatory I.D5.EGD.EP.87 Table 1. The income taxes for each year at line 14 are showing as negative amounts as the revenue requirement calculations are, a) being calculated from the cost side of an equation only without an assumed revenue recovery and, b) include a contributing credit to taxes from tax deductible capital cost allowance amounts outpacing non tax deductible book depreciation

[1] For reasons described in interrogatory response I.D5.EGD.Staff.48, the revenue requirement amounts assume Segment A's Bram West to Albion is a 36" pipeline.

Witnesses: K. Culbert
C. Fernandes
M. Giridhar
A. Kacicnik
S. Murray

amounts. However, line 17 also shows the additional impact within taxes that occurs once rates were to recover the gross revenue amounts shown as being required at line 15. The visual of total tax amounts within line 14 and line 17 in fact shows positive income taxes for years beyond the partial in service fiscal year 2015.

d) As indicated in response to part c), the Company has provided an updated shared pipeline revenue requirement at interrogatory I.D5.EGD.EP.87 Table 1. To illustrate the rate impacts, the Company has used the 2016 forecast revenue requirement as this represents the highest level of revenue requirement and rate impact for the project. The revenue requirement for the project decreases over time as the assets depreciate. The updated shared pipeline revenue requirement forecast for 2016 is $23.6 million which is shared 50/50 between Enbridge and TCPL. Therefore, the shared pipeline revenue requirement to be recovered from Enbridge's customers in 2016 is $11.8 million. Enbridge will utilize its portion to meet the transportation and seasonal balancing needs of its customers. The $11.8 million will be recovered in Enbridge's rates as 50% transportation related and 50% seasonal related. The transportation related costs will be allocated to the rate classes based on bundled transportation volumes and recovered in the Transportation rate. The seasonal costs are further classified as 60% deliverability related and allocated to the rate classes based on the deliverability factor and 40% space related and allocated to the rate classes based on seasonal space. The seasonal costs are recovered in the Company's delivery rates. The estimated average rate impact from the Enbridge shared pipeline revenue requirement for 2016 on Enbridge's rate classes is as follows:

Witnesses: K. Culbert
C. Fernandes
M. Giridhar
A. Kacicnik
S. Murray

		BUNDLED RATES	
Rate Class		**Sales Service**	
1		0.5%	
6		0.5%	
9		0.2%	
100		0.4%	
110		0.4%	
115		0.4%	
135		0.4%	
145		0.4%	
170		0.5%	
200		0.5%	
		UNBUNDLED RATES	
125		0.0%	
300		0.0%	

Please also see A4.EGD.ED.21 where both rate and bill impacts are shown.

e) Please see response to Board Staff Interrogatory #48 at I.D5.EGD.STAFF.48.

f) Enbridge and TransCanada are currently negotiating the details of the TSA, thus a completed TSA is not available at this time.

g) Please see response to Board Staff Interrogatory #48 at I.D5.EGD.STAFF.48. The recent TransCanada election is being incorporated the TSA.

h) The base case feasibility models a shared NPS 36 for Segment A. Please refer to response to Board Staff Interrogatory #48 at I.D5.EGD.STAFF.48

i) The design capacity of the NPS 42 is 2000 TJ/d and the NPS 36 is 1600 TJ/d. In both cases the sharing arrangement reserves 800 TJ/d for Enbridge to serve the distribution system.

Witnesses: K. Culbert
C. Fernandes
M. Giridhar
A. Kacicnik
S. Murray

j) The detailed estimated project capital costs for the Shared Pipeline can be found at Exhibit C, Tab 2, Schedule 1. The estimated annual O&M for the shared pipeline is approximately $380,000. Note, this is the 40 year average excluding the partial year in 2015. The arrangement with TransCanada is outlined in Exhibit E, Tab 2, Schedule 2. The feasibility input parameters can be found at Exhibit E, Tab 1, Schedule 1, Pages 8 and 9.

Included in the Economic Feasibility is 10.25 years of net transportation savings and 40 years of revenues from rate 332.

k) No. The applicability of Rate 332: Bram West to Albion Transportation Service is specific to the proposed Transportation Service Agreement with TransCanada Pipelines Limited ("TransCanada").

l) A key difference between the two rates is that the applicability of Rate 332: Bram West to Albion Transportation Service is specific to the proposed Transportation Service Agreement with TransCanada Pipelines Limited ("TransCanada"). Rate 331: Tecumseh Transportation Service is applicable to shippers who enter into an agreement with the Company for transportation service on the Company's pipelines extending from Tecumseh to Dawn. For this reason, Rate 331 is designed as a Demand Rate, whereby a customer pays a fixed charge dependent on the capacity the customer wishes to ship on the Tecumseh to Dawn line. Since Rate 332 is specific to the TSA agreement with TransCanada, the Company proposed that Rate 332 monthly charge recovers TransCanada's share of the annual revenue requirement of the shared pipeline through 12 (equal) payments.

Further, the shared pipeline on which the Rate 332 is based on is a shared use facility by two entities and is the outcome of the OEB direction to the industry for integrated regional planning to optimize assets in the region.

m) Within the referred to Exhibit and the updated Table 1 referred to in part c) of this response, the 6.81% required rate of return on rate base is in fact the Company's 2013 Board Approved Cost of Capital. The 2013 Board Approved Cost of Capital was used for approximation purposes as the Company is not seeking Board Approval of total rate and revenue requirement impacts within this Leave-to-Construct proceeding but rather will be requesting approval of those impacts within its upcoming EB-2012-0459 rate application.

Witnesses: K. Culbert
C. Fernandes
M. Giridhar
A. Kacicnik
S. Murray

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
ASSOCIATION OF POWER PRODUCERS OF ONTARIO INTERROGATORY #12

INTERROGATORY

D.5 Should approval of Enbridge's proposed rate methodology for the service to be provided to TransCanada be granted?

Reference: EB-2012-0451 Exhibit E Tab 1Schedule 2 and Schedule 2 Attachment 1

Preamble: Enbridge provides a stand-alone rate for the capacity under contract to TransCanada and revenue requirement for Rate 332 for the Share Pipeline

a) Please provide the status of Enbridge's negotiations with TransCanada for both TransCanada's transportation agreement on Enbridge related to Segment A, as well as the status of the transportation agreement that Enbridge will have on TransCanada for the transportation between Parkway and Bram West.
b) Please describe how the revenue requirement will be re-determined through time if there are changes in: the actual installed capital cost, return, O&M expenses, taxes, depreciation rates, etc.
c) How will this service and its respective rates and other charges/credits be affected by future incentive rate proceedings?
d) In the event that this section of pipe requires some form of capital outlay in the future (such as a partial replacement, due to age, location or condition, abandonment etc. or reinforcement for growth) or a major O&M expense, how will the future revenue requirement be affected?
e) In the event that other parties are interested in contracting over the same path or other paths on the XHP system is this methodology rate available to other shippers? Explain.
f) Will Albion become a receipt point on the Enbridge system for deliveries by TransCanada for Enbridge's direct purchase customers?

Witness: M. Giridhar

<u>RESPONSE</u>

a) Please see the response to Board Staff Interrogatory #49 g) at Exhibit I.D5.EGD.STAFF.49.

b) The revenue requirement calculation for TransCanada will mimic the cost consequences of joint ownership under a single regulatory jurisdiction. As such, the revenue requirement calculation will be updated each year for the cost elements.

c) The service and rate offering will not be impacted by future incentive regulation proceedings for the reason outlined in b) above.

d) As noted in b) above, the revenue requirement calculation will be updated for increases in capital or O&M expense.

e) Enbridge does not have any other shippers who receive a similar service as contemplated for TransCanada. The methodology is not available for distribution service customers shippers for the reasons outlined below:
   - As noted in b) above, the Transportation Service Agreement reflects the cost consequences of joint ownership and therefore does not apply to the Company's distribution customers.
   - Secondly, the Transportation Service Agreement is inherently different from the distribution services offered by the Company to its customers in that it:
     i. Is a shared use facility by two entities;
     ii. Interconnects two transmission pipeline facilities;
     iii. Provides for a first right of refusal upon sale; and,
     iv. Is the product of an OEB direction to work with other industry participants to optimize assets in the region.

f) As outlined in Environmental Defence Interrogatory #1 at Exhibit I.A1.EGD.ED.1, the Company plans to consult on the specifics of the delivery point flexibility sought by direct purchase customers after the GTA Project receives regulatory approval.

Witness: M. Giridhar

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
CONSUMERS COUNCIL OF CANADA INTERROGATORY #26

INTERROGATORY

5. Should approval of Enbridge's proposed rate methodology for the service to be provided to TransCanada be granted?

D.5-CCC-26

Reference: E/T1/S2/pgs. 3-4

a) Section 36(2) of the *OEB Act* contemplates the Board making order "*approving or fixing just and reasonable rates*" 36(3) states "*In approving or fixing just and reasonable rates, the Board may adopt any method or technique*…" (emphasis added). In this application is Enbridge seeking an order which describes the methodology, but does not prescribe a rate?

b) If yes, please explain under which specific provision of the OEB Act this order will be made. Also provide Enbridge's view as to whether such an order would bind the Board in subsequent proceedings and irrespective of the actual rate that this methodology may produce at some future date?

c) Please provide the specific rate methodology text Enbridge proposes the Board approve.

RESPONSE

a) Confirmed. With respect to the proposed Rate 332 transportation service, Enbridge is asking for approval of the proposed Rate 332 transportation service and the methodology that will be applied to develop the monthly charge (i.e. rate) for Rate 332 transportation service. Enbridge is not seeking approval of a specific monthly charge (i.e. rate) for Rate 332 transportation service within this application. Enbridge will ask for such an approval within an annual rate adjustment application.

Witness: A. Kacicnik

b) To determine the conditions under which TransCanada will be provided service on the shared pipeline, Enbridge is relying on section 36 of the Ontario Energy Board Act, 1998, S.O. 1998, c-15, Schedule B to seek approval of the proposed Rate 332 transportation service to TransCanada and the methodology that will be applied to develop the monthly charge (i.e. rate) for Rate 332 transportation service.

In Enbridge's view, the proposed methodology that will be applied to develop the monthly charge (i.e. rate) for Rate 332 transportation service could be reviewed in front of the Board in a subsequent proceeding if there was a change in circumstances on which this proposal is based.

c) Enbridge proposes that the specific methodology that will be applied to develop the monthly charge (i.e. rate) for Rate 332 transportation service be based on the following text:

For the purposes of annual revenue requirement derivation and determination of Rate 332 monthly charge, the shared pipeline will be considered as a stand-alone cost item. The revenue requirement for the shared pipeline will be based on a cost-of-service methodology and will include costs for administration, operation, maintenance, depreciation, cost of debt, return on equity, and municipal and income taxes. The revenue requirement and the Rate 332 monthly charge will be updated annually. 50%[1] of the annual revenue requirement for the shared pipeline will be recovered from TransCanada. The Rate 332 monthly charge will recover TransCanada's share of the annual revenue requirement through 12 (equal) payments.

[1] Please see Exhibit I.D5.EGD.STAFF.48.

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO ENERGY PROBE RESEARCH FOUNDATION INTERROGATORY #86

INTERROGATORY

Issue D5 Should approval of Enbridge's proposed rate methodology for the service to be provided to TransCanada be granted?

Ref: EB-2012-0451Exhibit E, Tab1, Schedule 2, Pages 1-4

Preamble: TCPL will share cost of NPS 42" with incremental capital cost of $42.8 million. Otherwise EGD will build NPS 36" pipeline and retain 800,000 Gj/D capacity and TCPL the remaining Capacity.

Please provide a consolidated Table that shows the attributes of the various options for Segment A, add comments/notes as required.

Options	NPS 36” EGD Sole Use	NPS 36” Shared Use	NPS 42” EGD Sole Use *	NPS 42” Shared Use	Comments
Total Capacity Gj/D	800,000	1,600,000	800,000	2,000,000	
EGD Capacity Gj/D	800,000	800,000	800,000	800,000	
EGD Cost $m					
Other costs e.g. (connection to Parkway) $m (if not included above)					
Annual Operating Cost $m					
Toll Payable to TCPL Pkwy-Bram W					
TCPL Capacity GJ/d	0	800,000	0	1,200,000	
TCPL Cap Cost contribution					

TCPL annual Cost/Revenue (Rate 332 toll) $m					
*assumes TCPL does not take Rate 332 at some point					

RESPONSE

The response was filed in confidence with Board. Parties who signed a Declaration and Undertaking will also receive copies.

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
ENERGY PROBE RESEARCH FOUNDATION INTERROGATORY #87

INTERROGATORY

Issue D5 Should approval of Enbridge's proposed rate methodology for the service to be provided to TransCanada be granted?

Ref: EB-2012-0451 Exhibit E, Tab1, Schedule 2, Attachment

a) Confirm calculation shown in reference is for NPS 42" full shared use option.
Provide an equivalent calculation of the revenue requirement for the standalone (EGD sole use).

b) Please provide a Revenue Requirement for the other partial shared use options.

c) Assume TCPL does not renew the TSE after 15 years provide the Revenue
Requirement impact on EGD.

d) For each of the revenue requirement calculations provide the annual revenue from TCPL rate 332 service and the transportation margin to EGD.

e) Please provide full details of the Costs allocated to Rate 332.

f) Please provide details of the rate design for Rate 332.

RESPONSE

a) The calculation shown in Exhibit E, Tab 1, Schedule 2, attachment was for a 42" shared option. The Company has provided a 36" Segment A option for Transmission services which would be shared equally 50/50 by Enbridge and TranCanda in the attached Table 1[1]. Also provided in Table 2, is the Enbridge only Distribution services portion of a 36" Segment A option.

[1] Please see the response to Board Staff Interrogatory #48 at I.D5.EDG.STAFF.48.

Witnesses: K. Culbert
A. Kacicnik

b) This is currently the only shared use option.

c) If TransCanada were not to renew after 15 years, as per the MOU filed in CME Interrogatory Response #6 at Exhibit I.A1.EGD.CME.6, TransCanada would reimburse Enbridge its share of the residual net book value of the Segment A pipeline.

d) through f)

The proposed Rate 332 monthly charge is based on the annual cost (i.e. revenue requirement) to provide transportation service to TransCanada on the shared pipeline.

Enbridge proposes that the methodology for derivation of the Rate 332 monthly charge (i.e. rate) be based on the following;

- For the purposes of annual revenue requirement derivation and determination of Rate 332 monthly charge, the shared pipeline will be considered as a stand-alone cost item.
- The revenue requirement for the shared pipeline will be based on a cost-of-service methodology and will include costs for administration, operation, maintenance, depreciation, cost of debt, return on equity, and municipal and income taxes.
- The revenue requirement and the Rate 332 monthly charge will be updated annually.
- 50% of the annual revenue requirement for the shared pipeline will be recovered from TransCanada.
- The Rate 332 monthly charge will recover TransCanada's share of the annual revenue requirement through 12 (equal monthly) payments.

Therefore, as per the proposed approach, the annual revenue from TransCanada will match 50% of the annual revenue requirement for the shared pipeline. The Company will not incur any gas costs under the proposed Rate 332 service. Hence, the annual revenue from TransCanada will represent annual margin to Enbridge.

Witnesses: K. Culbert
A. Kacicnik

TABLE 1
REVENUE REQUIREMENT
GTA SEGMENT A TRANSPORTATION SHARED 36"

Line No.	($000's)	2015	2016	2017	2018
	Cost of capital				
1.	Rate base	45,671.9	218,932.3	211,845.4	204,758.5
2.	Required rate of return	6.81%	6.81%	6.81%	6.81%
3.	Cost of capital	3,110.5	14,910.5	14,427.8	13,945.2
	Cost of service				
5.	Operation and Maintenance	46.1	221.2	221.2	221.2
6.	Depreciation and amortization	1,181.4	7,088.2	7,088.3	7,088.3
7.	Municipal and other taxes	139.8	671.0	671.0	671.0
8.	Cost of service	1,367.2	7,980.5	7,980.5	7,980.6
	Income taxes on earnings				
12.	Excluding tax shield	(1,948.4)	(3,519.9)	(3,319.3)	(3,130.9)
13.	Tax shield provided by interest expense	(425.7)	(2,040.8)	(1,974.8)	(1,908.7)
14.	Income taxes on earnings	(2,374.1)	(5,560.8)	(5,294.0)	(5,039.6)
	Taxes on (def) / suff.				
15.	Gross (def.) / suff.	(2,862.1)	(23,578.4)	(23,284.7)	(22,974.3)
16.	Net (def.) / suff.	(2,103.6)	(17,330.1)	(17,114.3)	(16,886.1)
17.	Taxes on (def.) / suff.	758.5	6,248.3	6,170.5	6,088.2
18.	**Revenue requirement**	2,862.1	23,578.4	23,284.7	22,974.3
19.	TransCanada Share	50%	50%	50%	50%
20.	Annual Rate Revenue	$ 1,431.0	$ 11,789.2	$ 11,642.4	$ 11,487.2

TABLE 2
REVENUE REQUIREMENT
GTA SEGMENT A EGD DISTRIBUTION 36"

($000's)

Line No.		2015	2016	2017	2018
	Cost of capital				
1.	Rate base	10,203.2	48,439.6	47,363.0	46,286.3
2.	Required rate of return	6.81%	6.81%	6.81%	6.81%
3.	Cost of capital	694.9	3,299.0	3,225.7	3,152.3
	Cost of service				
5.	Operation and Maintenance	110.7	531.6	531.6	531.6
6.	Depreciation and amortization	179.4	1,076.6	1,076.6	1,076.6
7.	Municipal and other taxes	30.7	147.5	147.5	147.5
8.	Cost of service	320.9	1,755.7	1,755.7	1,755.7
	Income taxes on earnings				
12.	Excluding tax shield	(411.5)	(904.5)	(861.0)	(820.2)
13.	Tax shield provided by interest expense	(95.1)	(451.5)	(441.5)	(431.5)
14.	Income taxes on earnings	(506.6)	(1,356.1)	(1,302.6)	(1,251.6)
	Taxes on (def) / suff.				
15.	Gross (def.) / suff.	(692.8)	(5,032.1)	(5,005.2)	(4,974.7)
16.	Net (def.) / suff.	(509.2)	(3,698.6)	(3,678.8)	(3,656.4)
17.	Taxes on (def.) / suff.	183.6	1,333.5	1,326.4	1,318.3
18.	**Revenue requirement**	692.8	5,032.1	5,005.2	4,974.7

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
FEDERATION OF RENTAL-HOUSING PROVIDERS OF ONTARIO
INTERROGATORY #36

INTERROGATORY

REF: EB-2012-0451 EX. E, Tab 1 Schedule 2, page 2, paragraphs 7-8
Conditions Precedent

a. Please provide all conditions precedent including specified deadlines that will need to be fulfilled or waived prior to:

   i. Pipe ordering

   ii. Pipe installation

b. Are there any scenarios whereby EGD or its customers would be held responsible for incremental costs above the stated NPS 36 requirement?

RESPONSE

a. Please see the response to Board Staff Interrogatory #48 at Exhibit I.D5.EGD.STAFF.48 page 4. Based on the NPS 36 design from Bram West to Albion, there are no further conditions precedent that will impact pipe ordering and/or pipe installation.

b. No.

Witness: M. Giridhar

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO FEDERATION OF RENTAL-HOUSING PROVIDERS OF ONTARIO INTERROGATORY #37

INTERROGATORY

REF: EB-2012-0451 EX. E, Tab 1 Schedule 2, page 2, paragraphs 7-8
Conditions Precedent

Please provide the resulting full design capacity if EGD proceeds with the NPS 36 line.

RESPONSE

The design capacity of the NPS 36 would be 1600 TJ/d, with 800 TJ/d reserved for distribution system purposes as per Exhibit E, Tab 1, Schedule 2, paragraph 8.

Witness: C. Fernandes

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO SCHOOL ENERGY COALITION INTERROGATORY #4

INTERROGATORY

Issue: D5-SEC-4

[Ex.E/1/2] Please provide the rate impacts on each customer class, for the shared used pipeline with TransCanada.

RESPONSE

Please see the response to Board Staff Interrogatory #49 at Exhibit I.D5.EGD.STAFF.49 (d).

Witness: A. Kacicnik

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
SCHOOL ENERGY COALITION INTERROGATORY #5

INTERROGATORY

Issue: D5-SEC-5

[Ex.E/1/2]

Please provide the incremental revenue requirement that would be allocated to TransCanada if the cost allocation methodology used in EB-2012-0354 were utilized.

RESPONSE

The Company has provided updated Segment A shared pipeline revenue requirements[1]. Please see the response to Energy Probe Interrogatory #49 (b) at Exhibit I.D5.EGD.EP.87 Table 1 and Board Staff Interrogatory #49 (b) at Exhibit I.D5.EGD.Staff.49.

[1] For reasons described in interrogatory response I.D5.EGD.Staff.48, the revenue requirements assume Segment A's Bram West to Albion is a 36" pipeline.

Witnesses: K. Culbert
A. Kacicnik

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
VECC INTERROGATORY #5

INTERROGATORY

ISSUE D.5 Should approval of Enbridge's proposed rate methodology for the service to be provided to TransCanada be granted?

Reference: EB-2012-0451, Exhibit E, Tab 1, Schedule 2, page 3, paragraphs 10 and 11

The referenced paragraphs state:

10. Enbridge proposes to charge a rate that will be based upon a Board approved cost-of-service methodology and include costs for: administration, depreciation, debt cost, maintenance, operations, a return on equity, and taxes.

11. The Company proposes to treat the Shared Pipeline as a stand-alone cost item. Under this approach, a transportation services charge would be calculated by the Company on a cost-of-service basis, as detailed in paragraph 10. The charge would recover the revenue requirement associated with TransCanada's share of the Shared Pipeline. As mentioned, the TSA would contain sufficient termination provisions to ensure any unrecovered capital amounts are recovered from TransCanada.

a) Does EGD have any other rate classes whose rates have been set on such a stand-alone basis? If so, please provide details.

b) Can EGD confirm that under its shared pipeline proposal, TransCanada would make no contribution to the distribution system in the rates it was charged? If unable to so confirm, please explain fully.

c) Under a fully allocated cost of service study, how would the rates thus determined for TransCanada compare with the proposed rates? Is it not fair to assume the FACOS rate would be higher as it would involve some allocation of existing overheads to TransCanada while the proposal allocates none of these costs to TransCanada?

Witness: A. Kacicnik

d) Can EGD confirm that to avoid cross-subsidization, the rate charged to a class should recover an amount between (i) stand-alone costs and (ii) incremental costs? If unable to so confirm, please discuss fully.

e) Is it fair to conclude from paragraph 11 that there is no possibility of stranded asset recovery from in-franchise ratepayers?

<u>RESPONSE</u>

a) Yes. Tecumseh Storage services rates, Rates 325, 330 and 331, are set on a stand-alone basis. Such approach is in place to ensure the proper separation of costs between storage and distribution services and to remove potential for cross-subsidization between distinct services.

b) Confirmed. The proposed Rate 332 monthly charge is based on the specific annual cost (i.e. revenue requirement) to provide transportation service to TransCanada on the shared pipeline.

Having confirmed that, it is important to highlight the benefits to Enbridge's gas distribution customers facilitated by this project, inclusive of the shared pipeline arrangement with TransCanada, which is the outcome of the OEB direction to the industry for integrated regional planning to optimize assets in the region.

The project benefits to Enbridge's ratepayers consist of: integrated regional planning reflected in this project results in lower infrastructure costs, lower environmental and community impacts by eliminating duplicative infrastructure, as well as, gas supply benefits.

c) The proposed Rate 332 monthly charge is a fully allocated charge, based on a cost-of-service methodology. Also, please see the Company's evidence at Exhibit E, Tab 1, Schedule 2, pages 3 and 4.

d) To avoid/eliminate cross-subsidy issues rates for services provided need to be based on fully allocated costs.

Witness: A. Kacicnik

e) Confirmed. The rate methodology mimics the cost consequences of joint ownership, therefore TransCanada pays for its share of the capacity while the arrangement is in place, irrespective of utilization, and the residual net book value of its capacity share if it opts to terminate the arrangement.

Witness: A. Kacicnik